



CHIPCRAFT

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PATENT PENDING

CHIPCRAFT

**automatic chipcore
systems**



THE CHIPCRAFT COMPANY, MORRISTOWN, TENN.

Manufacturers and engineers:

Automatic wood waste utilization systems

Wood reconstitution equipment

CHIPCRAFT extruders

CHIPCRAFT EXTRUDERS are economical wood-waste utilization systems which provide an in-plant method for producing high quality corestock or panel board from wood byproducts.

1. CHIPCRAFT SYSTEMS ARE ENGINEERED TO PRODUCE HIGH QUALITY BOARD AT MINIMUM COST. A unique extrusion process delivers board of constant quality in a continuous, automatic sequence of operations.

2. IN MOST INSTANCES CHIPCRAFT SYSTEMS WILL FIT IN EXISTING PLANT SPACE. Extruder and associated equipment producing 6000 square feet of board daily, requires only 2500 square feet of floor space.

3. CHIPCRAFT SYSTEMS TAKE FULL ADVANTAGE OF AUTOMATIC OPERATION. A single employee can operate extruders of up to 12,000 square foot daily capacity. Material is handled by automatic processes from scrap lumber to finished board.

4. CHIPCRAFT SYSTEMS ARE VERSATILE. Board ranges in thickness from $\frac{3}{8}$ " to more than $1\frac{3}{4}$ " from the same press. Only minor adjustments are necessary to change board thickness. The board is cut to varying lengths needed in production by adjusting the automatic cut off saw. No edge trimming is required.

5. CHIPCRAFT EXTRUDERS PRODUCE BOARD FROM A VARIETY OF MATERIALS. Wood waste ranging from sawdust to slab may be fed into the system. Panels can be made of flax shives, bagasse, peanut shells, straw, and other fibrous materials.

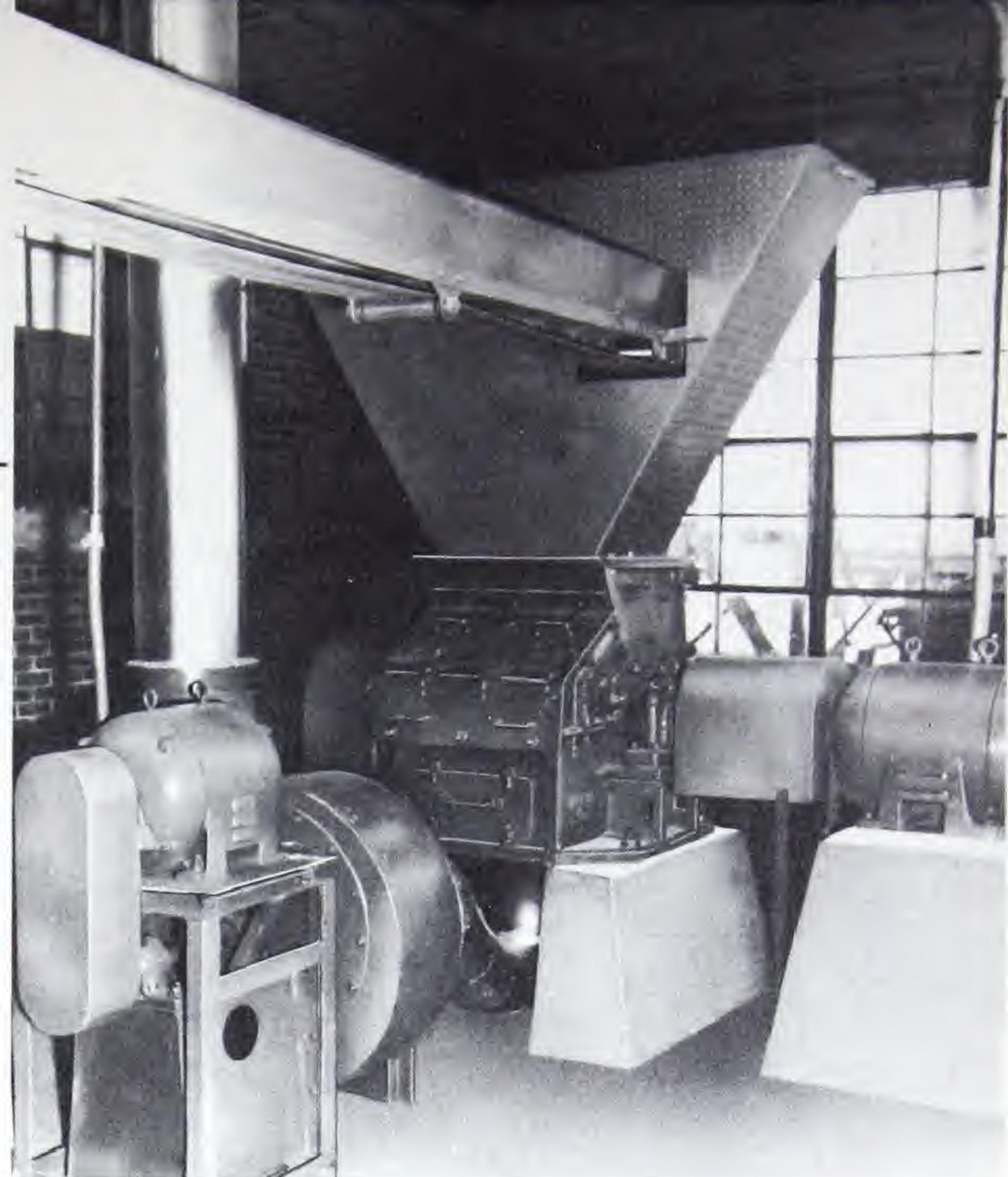
6. CHIPCRAFT SYSTEMS ARE ECONOMICAL. One half inch board can be produced for under \$50.00 per thousand square feet. This cost would include manufacturing cost, material, and amortization.

7. CHIPCRAFT PRICES BEGIN AS LOW AS \$64,500 for a complete system capable of producing 6000 square feet per day of useful board from wood waste.

CHIPCRAFT SYSTEMS INCLUDE . . .

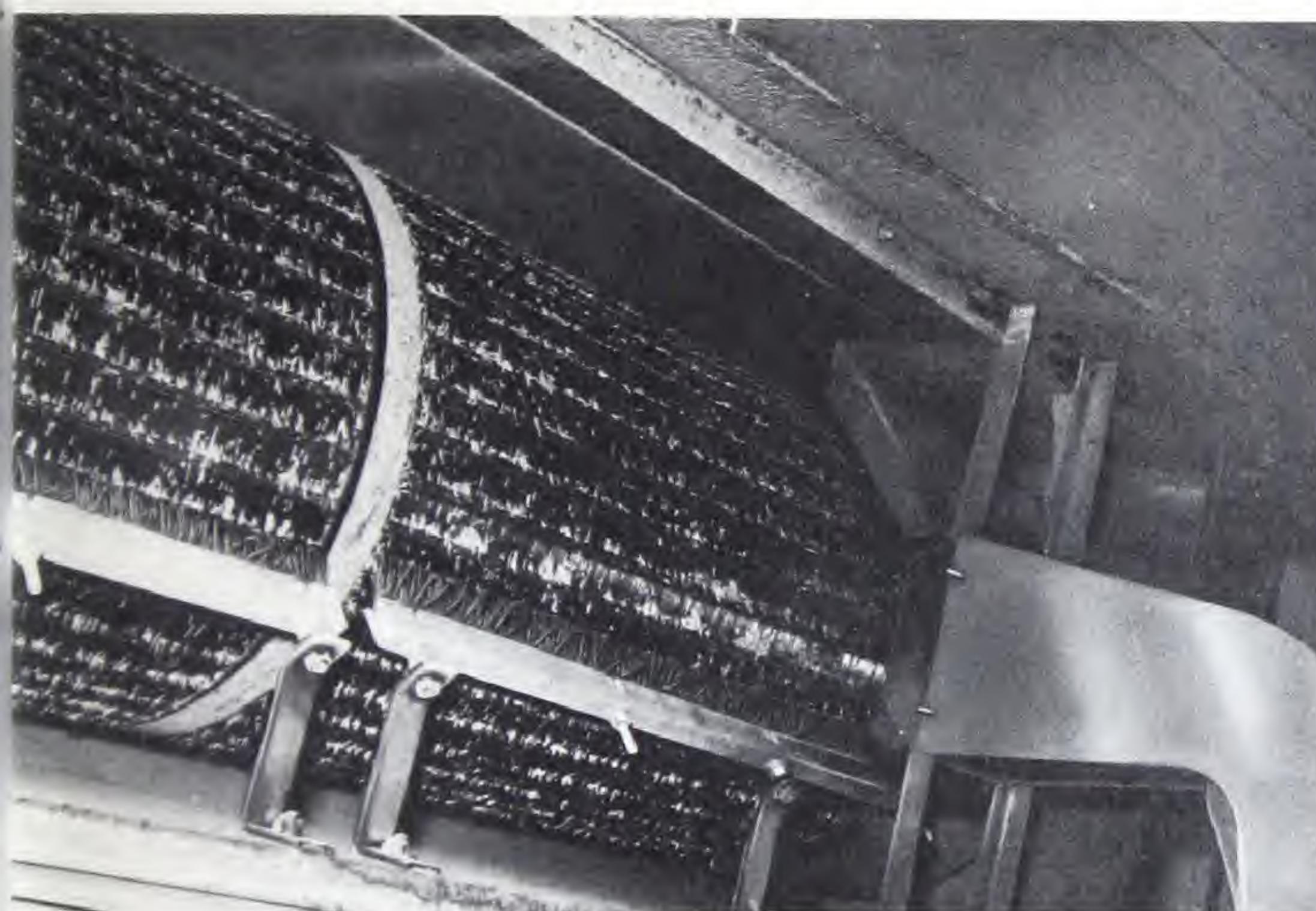
...A WOOD HOG

The wood hog reduces large wood waste to chips of the proper size for board production.



...A SCREEN GRADER AND CHIP STORAGE BIN

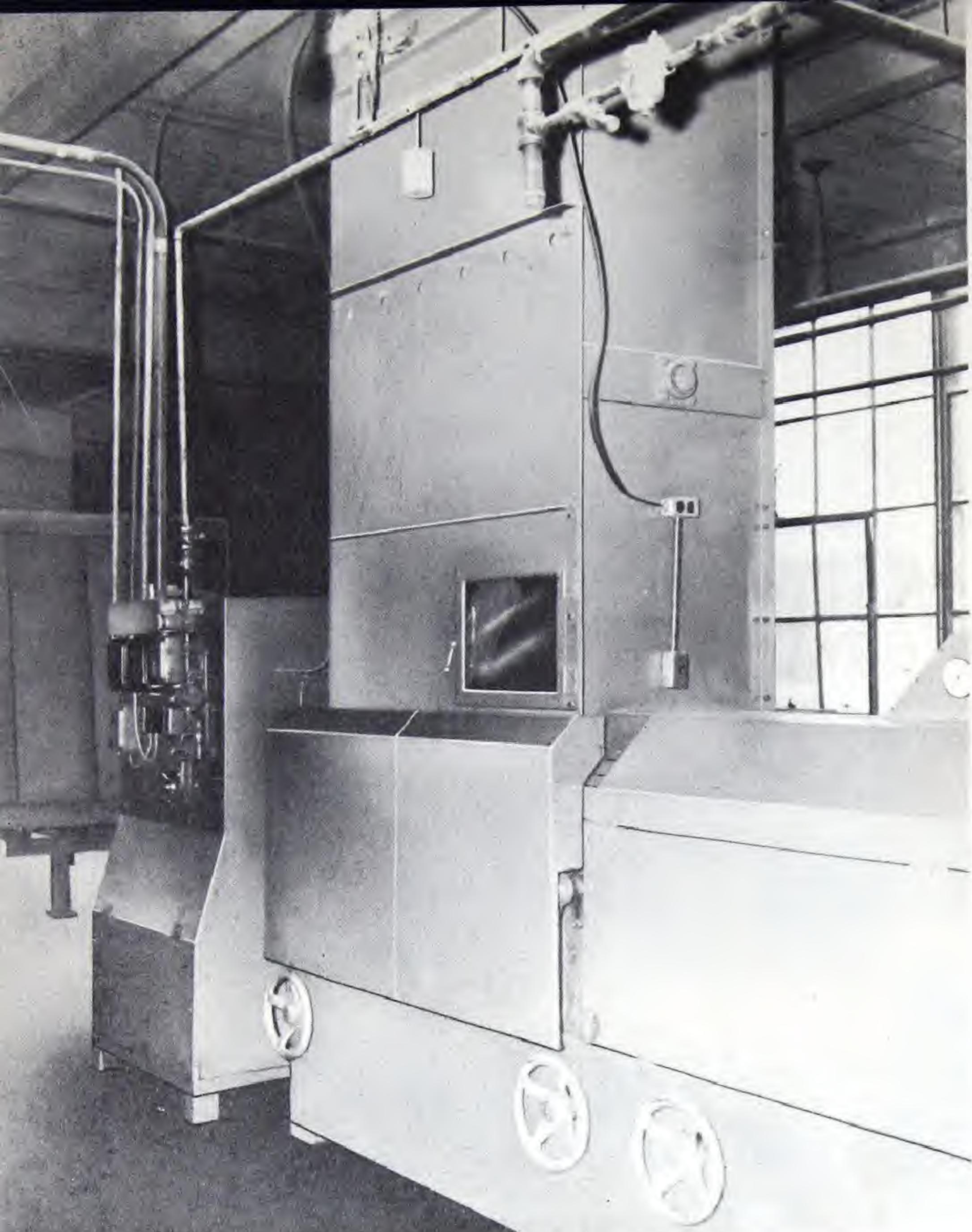
Chips fed by conveyor from the wood hog are screened and stored. Oversize chips are returned by conveyor for further reduction.



...CYCLONES AND PNEUMATIC CONVEYOR SYSTEM

Chips are conveyed from the hog to the screens and from the bin to the automatic metering section. Tramp metal is removed by a magnetic separator below the major cyclone.



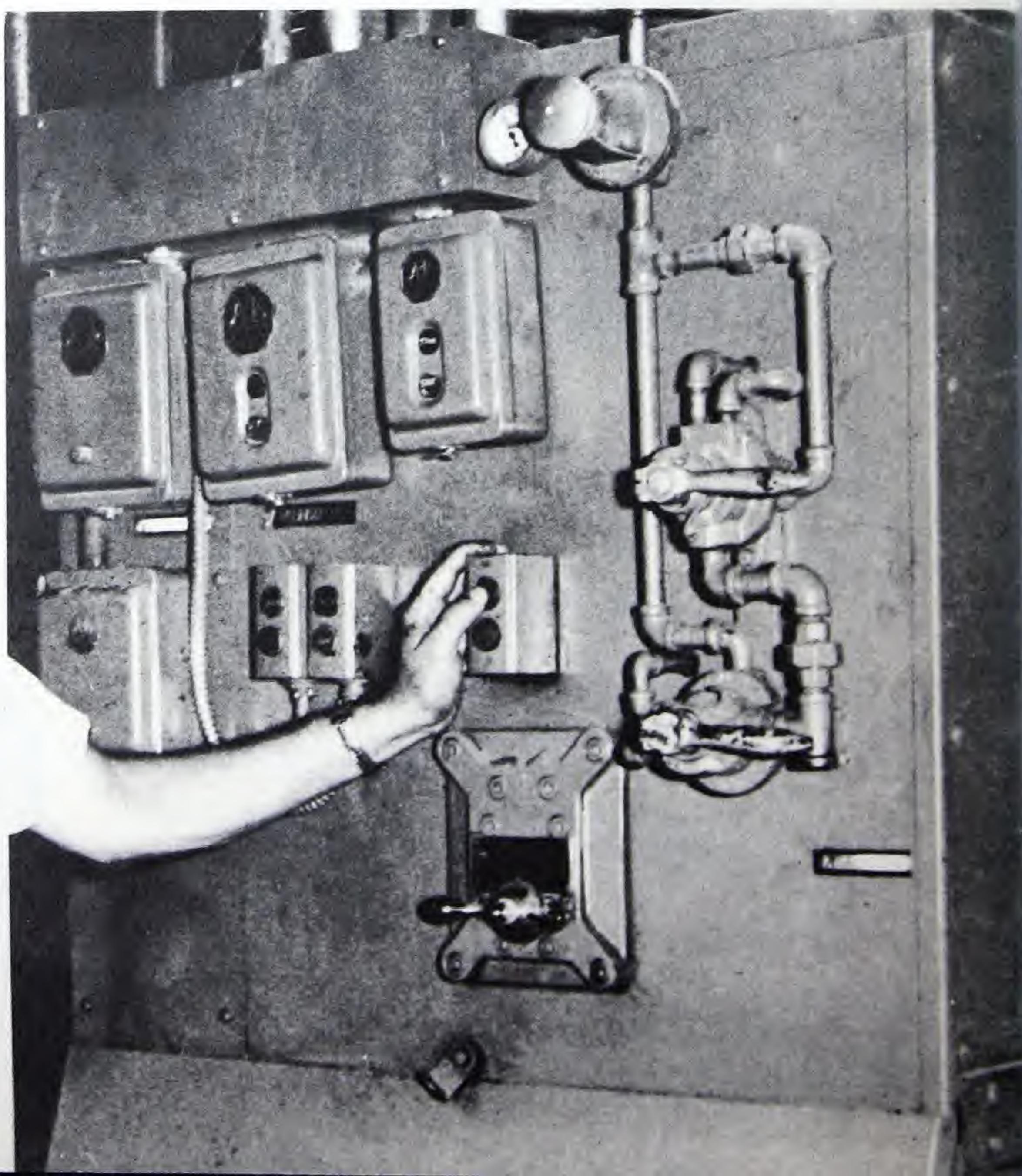


...THE CHIPCRAFT AUTOMATIC RESIN-CHIP BLENDING UNIT

At this stage chips are sprayed with adhesive resin and thoroughly blended. The mixture is then automatically metered to the extruder.

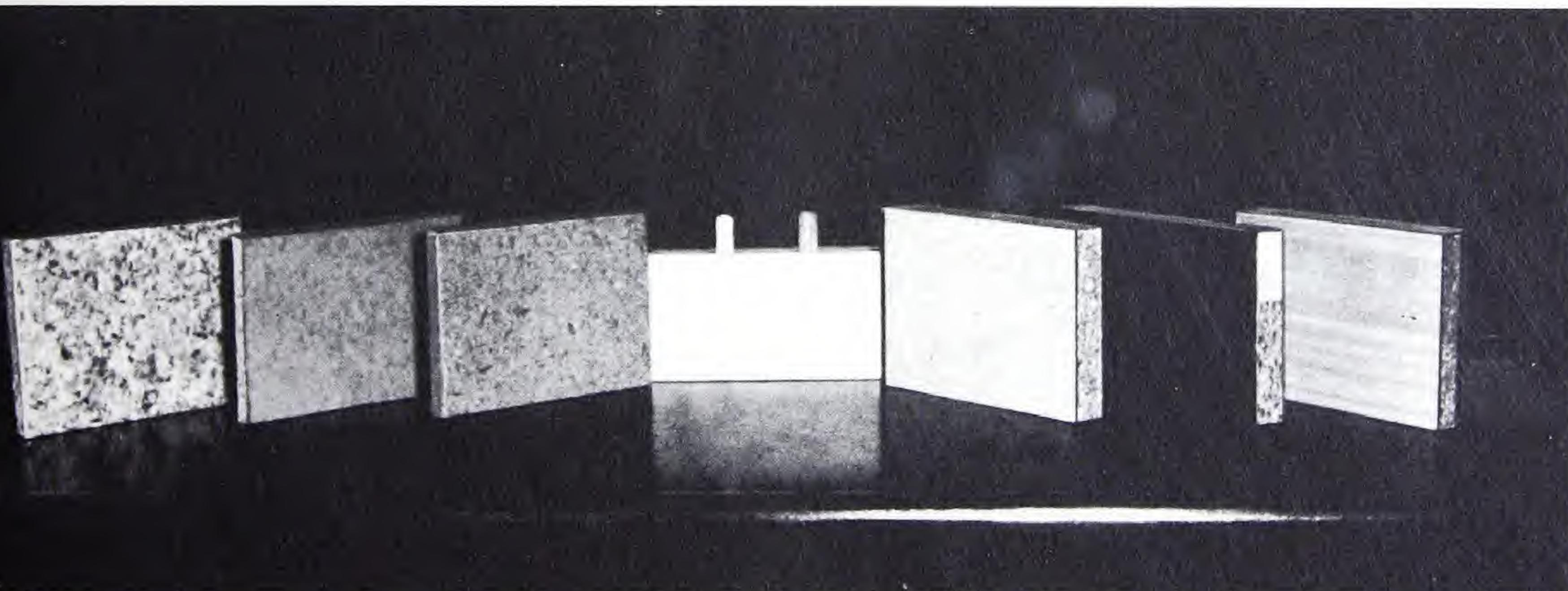
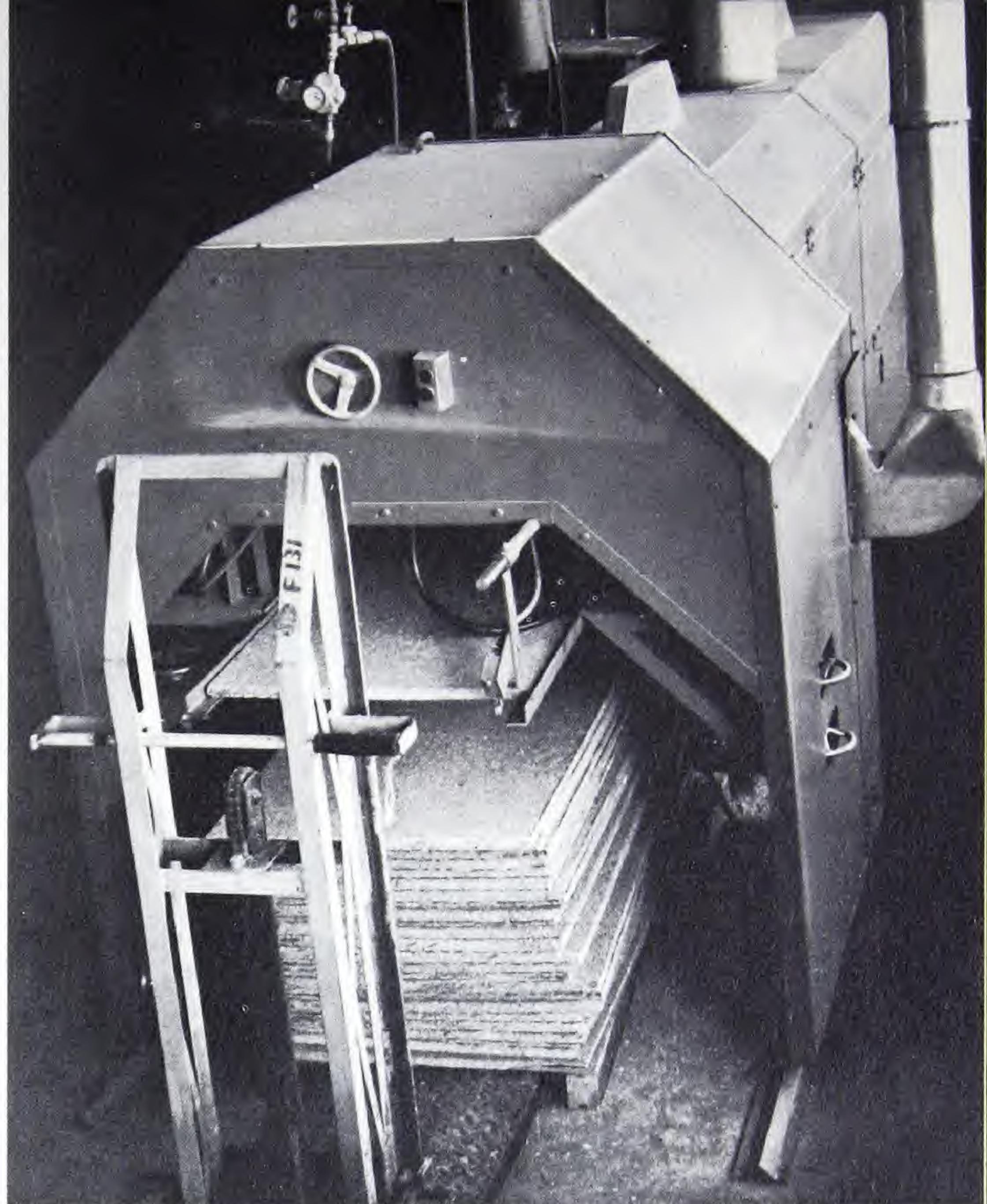
...CHIPCRAFT AUTOMATIC EXTRUDER CONTROL PANEL

A hydraulic or mechanically operated ram forces the resin-chip blend between adjustable heated platens where it is formed into firm, finished board ready for further processing.



...AUTOMATIC CUT OFF SAW SECTION

As the board emerges from the delivery end of the extruding section, it is cut to any desired length by an automatic cut off saw and stacked on pallets. A veneering press may be installed at this point and automatic handling extended throughout the veneering process.



...PRODUCTS OF THE CHIPCRAFT EXTRUDERS

The board produced by the Chipcraft system is a durable, dimensionally stable product resembling natural wood in its working characteristics. It may be worked with all woodworking tools, joined by all conventional processes and take coatings of metals, paper, plastics or wood veneers.

Economics of the process for:

HX-48 Type A System

1. Equipment Cost (subject change without notice)....	\$90,000.00		
2. Material Costs			
a. Wood chips or particles	\$5.00 per 2,000 lbs.		
b. Resin (62% solids)	\$0.095 per lb. delivered		
c. Catalyst	\$0.10 per lb. delivered		
3. Labor			
Machine operator	\$1.50 per hour		
4. Production per year $\frac{1}{2}$ " Board	2,250,000 square feet		
5. General Operating Expenses		Cost Per 1000	
Steam (400 x .40 x 24 x 250)	\$ 960		
Electricity (100 KW x 24 x .01 x 250)	\$ 6,000		
Maintenance	<u>\$ 3,000</u>		
		\$ 9,960	\$ 4.43
6. Materials Costs			
Wood chips or particles			
$\frac{2,250,000 \times 2 \times 5}{2,000} \dots$	\$11,250		
Resin mix			
$\frac{2,250,000 \times .030}{2,000} \dots$	<u>\$67,500</u>		
		\$ 78,750	\$35.00
7. Labor			
Machine operator — $3 \times 1.50 \times 8 \times 250 \dots$	\$ 9,000	\$ 9,000	\$ 4.00
8. Depreciation 10%		\$ 9,000	\$ 4.00
Total Mfg. Cost per year	<u>\$106,710</u>		
Mfg. Cost per 1,000 sq. ft.			\$47.43

Cost per Thousand Square Feet calculations (approximate) depending on local costs.

Economics of the process for:

HX-48 Type B System

1. Equipment Cost (subject change without notice).... \$150,000.00

2. Materials Costs

a. Wood chips or particles \$5.00 per 2,000 lbs.
b. Resin (62% solids) \$0.095 per lb. delivered
c. Catalyst \$0.10 per lb. delivered

3. Labor

Machine operator \$1.50 per hour

4. Production per year $\frac{1}{2}$ " Board 5,000,000 square feet

5. General Operating Expenses	Cost Per 1000
Steam 2(400 x .40 x 24 x 250)	\$ 1,920
Electricity 2(100 KW x 24 x .01 x 250)	\$ 12,000
Maintenance	<u>\$ 6,000</u>
	\$ 19,920 \$ 3.98

6. Materials Costs

Wood chips or particles

$\frac{5,000,000 \times 2 \times 5}{2,000} \dots$	\$ 25,000
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Resin mix

$5,000,000 \times .030 \dots$	<u>\$150,000</u>	\$175,000	\$35.00
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7. Labor

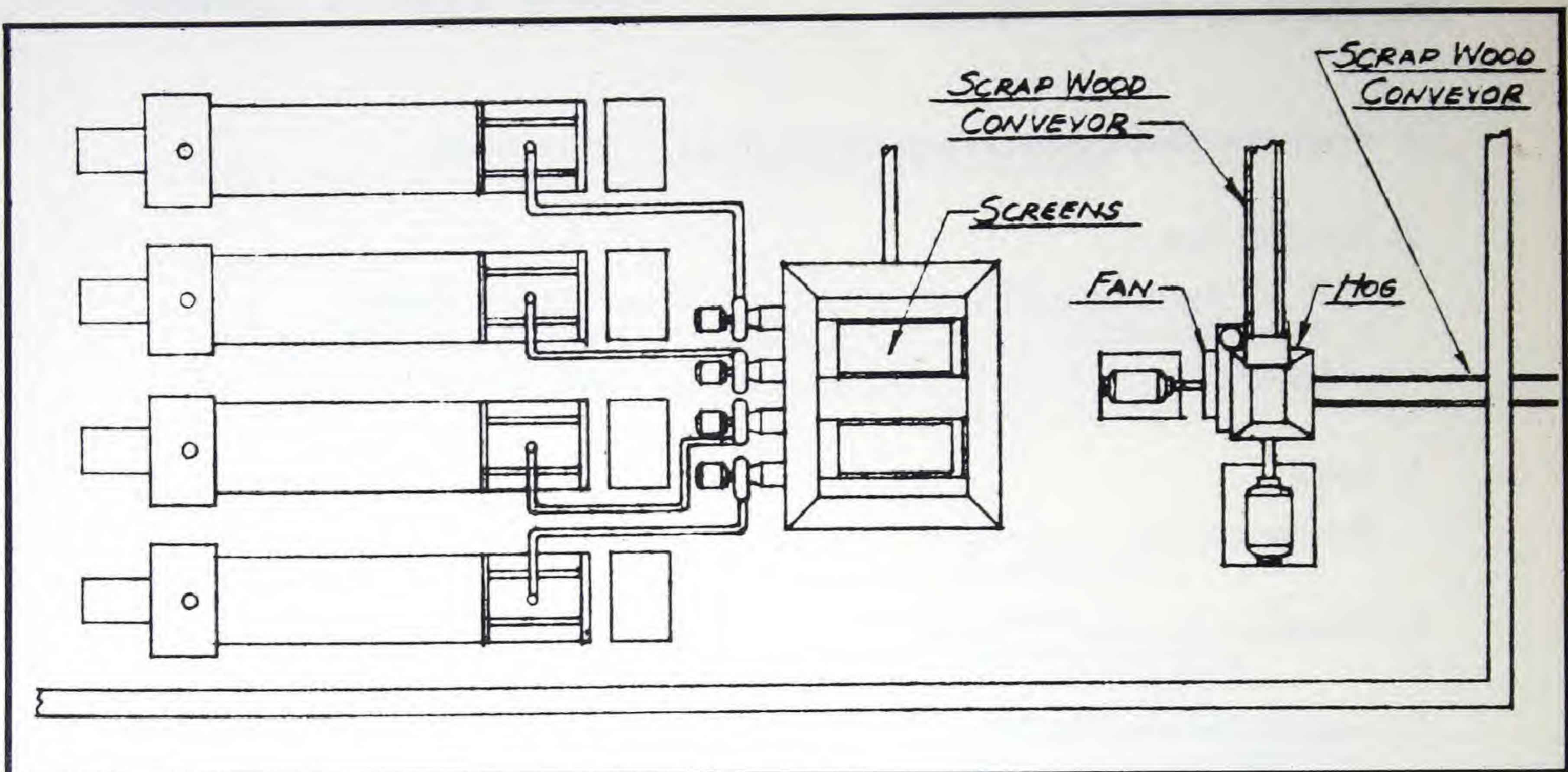
Machine operator — 3 x 1.50 x 8 x 250	\$ 9,000	
Helper — 3 x 1.00 x 8 x 250	<u>\$ 6,000</u>	
	\$ 15,000	\$ 3.00

8. Depreciation 10%	\$ 15,000	\$ 3.00
Total Mfg. Cost per year	<u>\$224,920</u>	
Mfg. Cost per 1,000 sq. ft.		\$44.98

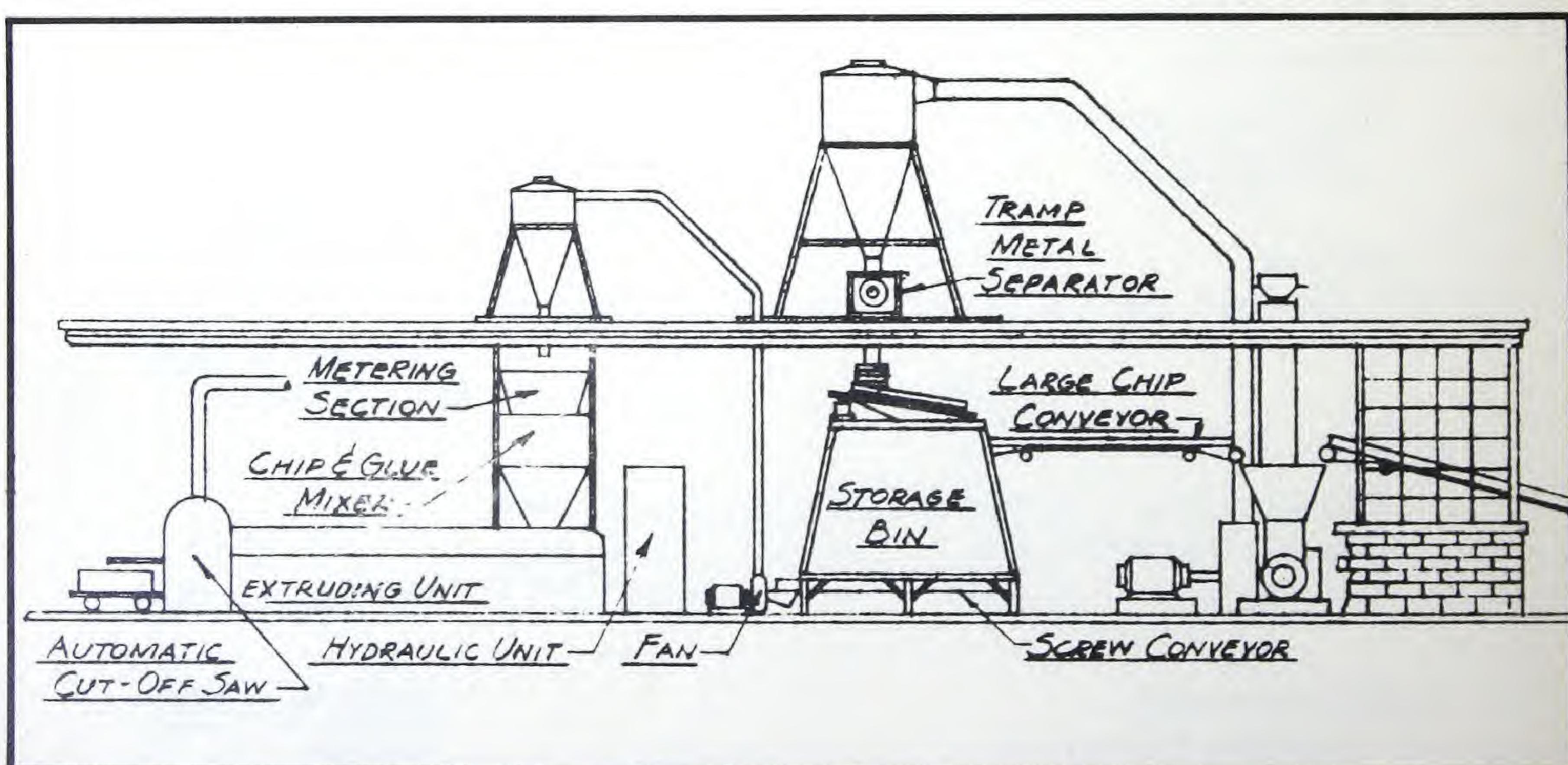
Cost per Thousand Square Feet calculations (approximate) depending on local costs.

Type D system

TOP VIEW SCHEMATIC



SIDE VIEW SCHEMATIC



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